

#47  
02 DO DT  
01-22-C

## RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/606,129

Source: O/PE

Date Processed by STIC: 7/12/2000

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR FURTHER INFORMATION, PLEASE TELEPHONE MARK SPENCER,  
703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

### **Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§ 1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

**Checker Version 3.0 can be down loaded from the USPTO website at the following address:**  
**<http://www.uspto.gov/web/offices/pac/checker>**

OIPE

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/606,129

DATE: 07/12/2000  
 TIME: 10:58:14

Input Set : A:\U607921.app  
 Output Set: N:\CRF3\07122000\I606129.raw

3 <110> APPLICANT: Maines, Mahin D.  
 5 <120> TITLE OF INVENTION: BILIVERDIN REDUCTASE FRAGMENTS AND VARIANTS, AND *See*  
 6 METHODS OF USING BILIVERDIN REDUCTASE AND SUCH  
 7 FRAGMENTS AND VARIANTS  
 9 <130> FILE REFERENCE: 176/60792  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/606,129  
 C--> 12 <141> CURRENT FILING DATE: 2000-06-28  
 14 <150> PRIOR APPLICATION NUMBER: 60/141,309  
 15 <151> PRIOR FILING DATE: 1999-06-28  
 17 <150> PRIOR APPLICATION NUMBER: 60/163,223  
 18 <151> PRIOR FILING DATE: 1999-11-03  
 20 <160> NUMBER OF SEQ ID NOS: 37  
 22 <170> SOFTWARE: PatentIn Ver. 2.1  
 24 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 296  
 26 <212> TYPE: PRT  
 27 <213> ORGANISM: Homo sapiens  
 29 <400> SEQUENCE: 1  
 30 Met Asn Ala Glu Pro Glu Arg Lys Phe Gly Val Val Val Val Gly Val  
 31 1 5 10 15  
 33 Gly Arg Ala Gly Ser Val Arg Met Arg Asp Leu Arg Asn Pro His Pro  
 34 20 25 30  
 36 Ser Ser Ala Phe Leu Asn Leu Ile Gly Phe Val Ser Arg Arg Glu Leu  
 37 35 40 45  
 39 Gly Ser Ile Asp Gly Val Gln Gln Ile Ser Leu Glu Asp Ala Leu Ser  
 40 50 55 60  
 42 Ser Gln Glu Val Glu Val Ala Tyr Ile Cys Ser Glu Ser Ser Ser His  
 43 65 70 75 80  
 45 Glu Asp Tyr Ile Arg Gln Phe Leu Asn Ala Gly Lys His Val Leu Val  
 46 85 90 95  
 48 Glu Tyr Pro Met Thr Leu Ser Leu Ala Ala Gln Glu Leu Trp Glu  
 49 100 105 110  
 51 Leu Ala Glu Gln Lys Gly Lys Val Leu His Glu Glu His Val Glu Leu  
 52 115 120 125  
 54 Leu Met Glu Glu Phe Ala Phe Leu Lys Glu Val Val Gly Lys Asp  
 55 130 135 140  
 57 Leu Leu Lys Gly Ser Leu Leu Phe Thr Ser Asp Pro Leu Glu Glu Asp  
 58 145 150 155 160  
 60 Arg Phe Gly Phe Pro Ala Phe Ser Gly Ile Ser Arg Leu Thr Trp Leu  
 61 165 170 175  
 63 Val Ser Leu Phe Gly Glu Leu Ser Leu Val Ser Ala Thr Leu Glu Glu  
 64 180 185 190  
 66 Arg Lys Glu Asp Gln Tyr Met Lys Met Thr Val Cys Leu Glu Thr Glu  
 67 195 200 205  
 69 Lys Lys Ser Pro Leu Ser Trp Ile Glu Glu Lys Gly Pro Gly Leu Lys  
 70 210 215 220  
 72 Arg Asn Arg Tyr Leu Ser Phe His Phe Lys Ser Gly Ser Leu Glu Asn

Does Not Comply  
 Corrected Diskette Needed

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 PATENT APPLICATION: US/09/606,129 TIME: 10:58:14

Input Set : A:\U607921.app  
 Output Set: N:\CRF3\07122000\I606129.raw

73	225	230	235	240
75	Val Pro Asn Val Gly Val Asn Lys Asn Ile Phe Leu Lys Asp Gln Asn			
76		245	250	255
78	Ile Phe Val Gln Lys Leu Leu Gly Gln Phe Ser Glu Lys Glu Leu Ala			
79		260	265	270
81	Ala Glu Lys Lys Arg Ile Leu His Cys Leu Gly Leu Ala Glu Glu Ile			
82		275	280	285
84	Gln Lys Tyr Cys Cys Ser Arg Lys			
85		290	295	
88	<210> SEQ ID NO: 2			
89	<211> LENGTH: 1070			
90	<212> TYPE: DNA			
91	<213> ORGANISM: Homo sapiens			
93	<400> SEQUENCE: 2			
94	gggggtggcgc cggagactgc acggagacg tgcccgtag tgaccgaaga agagaccaag 60			
95	atgaatgcag agcccgagag gaagtttggc ttgggtgggg ccgaggccgc 120			
96	tccgtcggtc tgaggactt gcgaaatcca cacecttcct cagcgttccct gAACCTGATT 180			
97	ggcttcgtgt cgagaaggaa gctcggggc attgtatgg tccaggcagat ttctttggag 240			
98	gatgtcttt ccagccaaga ggttgggtc gctataatct gcagttagag ctccagccat 300			
99	gaggactaca tcaggcgtt ccttaatgtc ggcaaggacg tccttggaa atacccatg 360			
100	acactgtcat tggccggcgc tcaggaactt tgggagctgg ctgagcagaa aggaaaaatgc 420			
101	ttgcacgagg acgtatgttgc actcttgatg gaggattcg ctttcctgaa aaaagaatgtc 480			
102	gtggggaaag acctgtcttgc aagggtcgctc ctcttcacat ctgaccgggtt ggaagaagac 540			
103	cgggttggct tccctgcatt cagcgccatc ttcgtactga cttggctgtt ctccctttt 600			
104	ggggagcttt ctcttgttgc tgccactttt gaagagcggaa aggaaatgtca gtatatgaaa 660			
105	atgacagtgt gtctggagac agagaagaaa agtccactgt catggattga agaaaaagga 720			
106	cctgtctaa aacgaaacag atatattaagc ttccatttca agtctgggtc cttggagaaat 780			
107	gtgccaaatgt taggagtgaa taagaacata ttctgtaaag atcaaaatat atttgtccag 840			
108	aaactcttgg gccagtttc tgaaaggaa ctggctgtc aaaagaaacg catctgcac 900			
109	tgcctggggc ttgcagaaga aatccagaaa tattgtgtt caaggaagta agaggaggag 960			
110	gtgtatgtgc acttccaaga tggcaccacg atttggttct tctcaagagt tgaccatttt 1020			
111	ctctattttt aaaaattaaac atgttggaa aacaaaaaaaaaaaaaaa 1070			
114	<210> SEQ ID NO: 3			
115	<211> LENGTH: 296			
116	<212> TYPE: PRT			
117	<213> ORGANISM: Homo sapiens			
119	<400> SEQUENCE: 3			
120	Met Asn Thr Glu Pro Glu Arg Lys Phe Gly Val Val Val Val Gly Val			
121	1	5	10	15
123	Gly Arg Ala Gly Ser Val Arg Met Arg Asp Leu Arg Asn Pro His Pro			
124	20	25	30	
126	Ser Ser Ala Phe Leu Asn Leu Ile Gly Phe Val Ser Arg Arg Glu Leu			
127	35	40	45	
129	Gly Ser Ile Asp Gly Val Gln Gln Ile Ser Leu Glu Asp Ala Leu Ser			
130	50	55	60	
132	Ser Gln Glu Val Glu Val Ala Tyr Ile Cys Ser Glu Ser Ser Ser His			
133	65	70	75	80
135	Glu Asp Tyr Ile Arg Gln Phe Leu Asn Ala Gly Lys His Val Leu Val			
136	85	90	95	

RAW SEQUENCE LISTING

DATE: 07/12/2000

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TIME: 10:58:14

Input Set : A:\U607921.app  
Output Set: N:\CRF3\07122000\I606129.raw

138 Glu Tyr Pro Met Thr Leu Ser Leu Ala Ala Ala Gln Glu Leu Trp Glu  
139 100 105 110  
141 Leu Ala Glu Gln Lys Gly Lys Val Leu His Glu Glu His Val Glu Leu  
142 115 120 125  
144 Leu Met Glu Glu Phe Ala Phe Leu Lys Lys Glu Val Val Gly Lys Asp  
145 130 135 140  
147 Leu Leu Lys Gly Ser Leu Leu Phe Thr Ala Gly Pro Leu Glu Glu Glu  
148 145 150 155 160  
150 Arg Phe Gly Phe Pro Ala Phe Ser Gly Ile Ser Arg Leu Thr Trp Leu  
151 165 170 175  
153 Val Ser Leu Phe Gly Glu Leu Ser Leu Val Ser Ala Thr Leu Glu Glu  
154 180 185 190  
156 Arg Lys Glu Asp Gln Tyr Met Lys Met Thr Val Cys Leu Glu Thr Glu  
157 195 200 205  
159 Lys Lys Ser Pro Leu Ser Trp Ile Glu Glu Lys Gly Pro Gly Leu Lys  
160 210 215 220  
162 Arg Asn Arg Tyr Leu Ser Phe His Phe Lys Ser Gly Ser Leu Glu Asn  
163 225 230 235 240  
165 Val Pro Asn Val Gly Val Asn Lys Asn Ile Phe Leu Lys Asp Gln Asn  
166 245 250 255  
168 Ile Phe Val Gln Lys Leu Leu Gly Gln Phe Ser Glu Lys Glu Leu Ala  
169 260 265 270  
171 Ala Glu Lys Lys Arg Ile Leu His Cys Leu Gly Leu Ala Glu Glu Ile  
172 275 280 285  
174 Gln Lys Tyr Cys Cys Ser Arg Lys  
175 290 295  
178 <210> SEQ ID NO: 4  
179 <211> LENGTH: 295  
180 <212> TYPE: PRT  
181 <213> ORGANISM: Rattus norvegicus  
183 <400> SEQUENCE: 4  
184 Met Asp Ala Glu Pro Lys Arg Lys Phe Gly Val Val Val Val Gly Val  
185 1 5 10 15  
187 Gly Arg Ala Gly Ser Val Arg Leu Arg Asp Leu Lys Asp Pro Arg Ser  
188 20 25 30  
190 Ala Ala Phe Leu Asn Leu Ile Gly Phe Val Ser Arg Arg Glu Leu Gly  
191 35 40 45  
193 Ser Leu Asp Glu Val Arg Gln Ile Ser Leu Glu Asp Ala Leu Arg Ser  
194 50 55 60  
196 Gln Glu Ile Asp Val Ala Tyr Ile Cys Ser Glu Ser Ser His Glu  
197 65 70 75 80  
199 Asp Tyr Ile Arg Gln Phe Leu Gln Ala Gly Lys His Val Leu Val Glu  
200 85 90 95  
202 Tyr Pro Met Thr Leu Ser Phe Ala Ala Gln Glu Leu Trp Glu Leu  
203 100 105 110  
205 Ala Ala Gln Lys Gly Arg Val Leu His Glu Glu His Val Glu Leu Leu  
206 115 120 125  
208 Met Glu Glu Phe Glu Phe Leu Arg Arg Glu Val Leu Gly Lys Glu Leu  
209 130 135 140

RAW SEQUENCE LISTING DATE: 07/12/2000  
PATENT APPLICATION: US/09/606,129 TIME: 10:58:14

Input Set : A:\U607921.app  
Output Set: N:\CRF3\07122000\I606129.raw

RAW SEQUENCE LISTING DATE: 07/12/2000  
 PATENT APPLICATION: US/09/606,129 TIME: 10:58:14

Input Set : A:\U607921.app  
 Output Set: N:\CRF3\07122000\I606129.raw

275 <223> OTHER INFORMATION: Description of Artificial Sequence: hydrophobic  
 276 domain of BVR  
 278 <220> FEATURE:  
 279 <221> NAME/KEY: PEPTIDE  
 280 <222> LOCATION: (2)  
 281 <223> OTHER INFORMATION: where X is any aa  
 283 <400> SEQUENCE: 6  
 284 Phe Xaa Val Val Val Val  
 285 1 5  
 288 <210> SEQ ID NO: 7  
 289 <211> LENGTH: 6  
 290 <212> TYPE: PRT  
 291 <213> ORGANISM: Artificial Sequence  
 293 <220> FEATURE:  
 294 <223> OTHER INFORMATION: Description of Artificial Sequence: nucleotide  
 295 binding domain of BVR  
 297 <220> FEATURE:  
 298 <221> NAME/KEY: PEPTIDE  
 299 <222> LOCATION: (2)  
 300 <223> OTHER INFORMATION: where X is any aa  
 302 <400> SEQUENCE: 7  
 303 Gly Xaa Gly Xaa Xaa Gly  
 304 1 5  
 307 <210> SEQ ID NO: 8  
 308 <211> LENGTH: 8  
 309 <212> TYPE: PRT  
 310 <213> ORGANISM: Artificial Sequence  
 312 <220> FEATURE:  
 313 <223> OTHER INFORMATION: Description of Artificial Sequence:  
 314 oxidoreductase domain of BVR  
 316 <400> SEQUENCE: 8  
 317 Ala Gly Leu His Val Leu Val Glu  
 318 1 5  
 321 <210> SEQ ID NO: 9  
 322 <211> LENGTH: 29  
 323 <212> TYPE: PRT  
 324 <213> ORGANISM: Artificial Sequence  
 326 <220> FEATURE:  
 327 <223> OTHER INFORMATION: Description of Artificial Sequence: leucine  
 zipper of BVR  
 328 <220> FEATURE:  
 331 <221> NAME/KEY: PEPTIDE  
 332 <222> LOCATION: (2)  
 333 <223> OTHER INFORMATION: where X is any aa  
 335 <400> SEQUENCE: 9  
 W--> 336 Leu Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Lys Xaa  
 337 1 10 15  
 W--> 339 Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Leu  
 340 20 25

← what about Xaa's at locations 3-7, 9-14, 16-21,  
 23-28?

fyi

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/606,129

DATE: 07/12/2000

TIME: 10:58:15

Input Set : A:\U607921.app  
Output Set: N:\CRF3\07122000\I606129.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number  
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6.  
L:303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:471 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17